

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

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Claim 1 (Currently amended): A camera control system comprising:

first image pickup device which picks up an image of an object through a wide-angle lens having distortion, to output a moving image;

image processing device which performs projective transformation processing to correct distortion of the moving image outputted from said first image pickup device;

second image pickup device having no distortion, which outputs a moving image; display device which displays the moving image processed by said image processing device, and which superimposes and displays, on the displayed moving image, a rectangular frame indicative of an image-pickup area of said second image pickup device, and displays the moving image from said second image pickup device together with the processed moving image and the rectangular frame;

designating device which designates a desired rectangular area within the moving image displayed by said display device; and

control device which controls at least one of panning, tilting and zooming of said second image pickup device in such a way as to pick up an image corresponding to the rectangular area designated by said designating device, and;

wherein, a frame image included in the processed moving image of the first image pickup device to be displayed by said display device is generated in response that the desired rectangular area is designated by said designating device.

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Claim 2 (Previously presented): A camera control system according to claim 1, wherein said display device displays, on a common screen, the moving image processed by said image processing device and the moving image outputted from said second image pickup device.

Claim 3 (Previously presented): A camera control system according to claim 1, wherein a position and a size of the rectangular frame displayed by said display device are determined on the basis of a parameter outputted from said second image pickup device.

Claim 4 (Previously presented): A camera control system according to claim 1, further comprising:

frame rate control device which makes a frame rate of the moving image outputted from said second image pickup device higher than a frame rate of the moving image processed by said image processing device, before the moving images are outputted to said display device.

Claim 5 (Previously presented): A camera control system according to claim 1, wherein said first image pickup device includes a plurality of image pickup devices, and said image processing device processes and combines moving images outputted from said plurality of image pickup devices into one moving image.

Claim 6 (Previously presented): A camera control system according to claim 1, further comprising:

an optical member for making object light incident thereon; and

an optical splitting member for splitting the object light coming through said optical member into two light beams and for making the two split light beams incident on said first image pickup device and said second image pickup device, respectively, so that image-pickup optical axes of said first image pickup device and said second image pickup device coincide with each other.

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Claim 7 (Previously presented): A camera control system according to claim 1, wherein said image processing device executes an affine transformation on the basis of information on an image-pickup direction of said first image pickup device.

Claim 8 (Previously presented): A camera control system according to claim 1, wherein said wide-angle lens having distortion for use with said first image pickup device is a fisheye lens.

Claim 9 (Withdrawn): A camera control system comprising:

a convex mirror for reflecting object light incident thereon; and
image pickup means for picking up the object light reflected from said convex mirror, to output a moving image,

wherein said convex mirror is constructed such that a surface thereof has a fovea-centralis-like configuration in which a central portion of the surface is formed as a low-curvature surface and a peripheral portion of the surface is formed as a high-curvature surface.

Claim 10 (Withdrawn): A camera control system according to claim 9, wherein said convex mirror has a curved surface made by, when a center axis of said convex mirror is taken as Y axis, rotating a curve expressed by $Y = aX^4$ (a : constant) around the Y axis.

Claim 11 (Withdrawn): A camera control system according to claim 9, further comprising:

image processing means for removing distortion of a peripheral portion of the moving image outputted from said image pickup means; and
display means for displaying the moving image processed by said image processing means.

Claim 12 (Currently amended): A camera control method comprising the steps of:

picking up an image of an object by using first image pickup means through a wide-angle lens having distortion, to output a moving image;

performing projective transformation processing to correct distortion of the moving image outputted from said first first image pickup means;

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outputting a moving image by using second image pickup means having no distortion; displaying the processed moving image, and superimposing and displaying, on the displayed moving image, a rectangular frame indicative of an image-pickup area of said second image pickup means, and displaying the moving image from said second image pickup means together with the processed moving image and the rectangular frame;

designating a desired rectangular area within the displayed moving image; and controlling at least one of panning, tilting and zooming of said second image pickup means in such a way as to pick up an image corresponding to the designated rectangular area; and wherein, a frame image included in the processed moving image of the first image pickup means to be displayed is generated in response that the desired rectangular area is designated.

Claim 13 (Original): A camera control method according to claim 12, wherein the processed moving image and the moving image outputted from said second image pickup means are displayed on a common screen.

Claim 14 (Original): A camera control method according to claim 12, wherein a position and a size of the displayed rectangular frame are determined on the basis of a parameter outputted from said second image pickup means.

Claim 15 (Original): A camera control method according to claim 12, further comprising the step of:

making a frame rate of the moving image outputted from said second image pickup means higher than a frame rate of the processed moving image, before the moving images are outputted to be displayed.

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Claim 16 (Original): A camera control method according to claim 12, wherein said first image pickup means includes a plurality of image pickup means, and moving images outputted from said plurality of image pickup means are processed and combined into one moving image.

Claim 17 (Original): A camera control method according to claim 12, further comprising the step of:

making object light incident on an optical member; and
splitting the object light coming through said optical member into two light beams and
making the two split light beams incident on said first image pickup means and said second
image pickup means, respectively, so that image-pickup optical axes of said first image pickup
means and said second image pickup means coincide with each other.

Claim 18 (Original): A camera control method according to claim 12, wherein said projective
transformation processing includes an affine transformation which is executed on the basis of
information on an image-pickup direction of said first image pickup means.

Claim 19 (Original): A camera control method according to claim 12, wherein said wide-angle
lens having distortion for use with said first image pickup means is a fisheye lens.

Claim 20 (Currently Amended): A storage medium which stores therein a program for executing
a process of controlling a camera control system, said process comprising:

picking up an image of an object by using first image pickup means through a wide-angle
lens having distortion, to output a moving image;

performing projective transformation processing to correct distortion of the moving
image outputted from said first image pickup means;

outputting a moving image by using second image pickup means having no distortion;
displaying the processed moving image, and superimposing and displaying, on the

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displayed moving image, a rectangular frame indicative of an image-pickup area of said second image pickup means, and displaying the moving image from said second image pickup means together with the processed moving image and the rectangular frame;

designating a desired rectangular area within the displayed moving image; and controlling at least one of panning, tilting and zooming of said second image pickup means in such a way as to pick up an image corresponding to the designated rectangular area; and wherein, a frame image included in the processed moving image of the first image pickup means to be displayed is generated in response that the desired rectangular area is designated.